

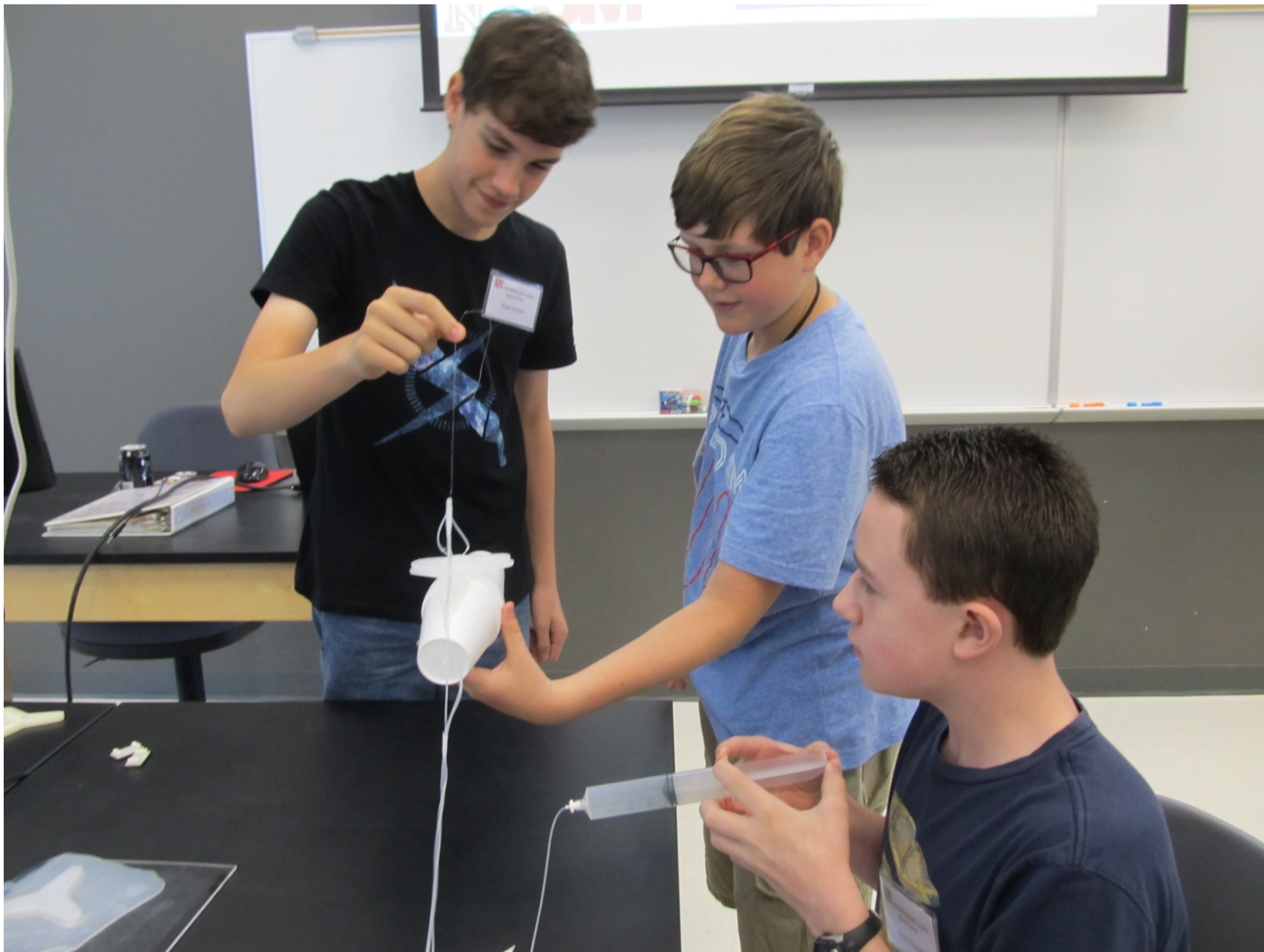
NCMN/Bright Lights 2016 Nanocamp

Monday

- **Soft Materials Robotics**
- **Materials in Medicine**
- **Magnetism**







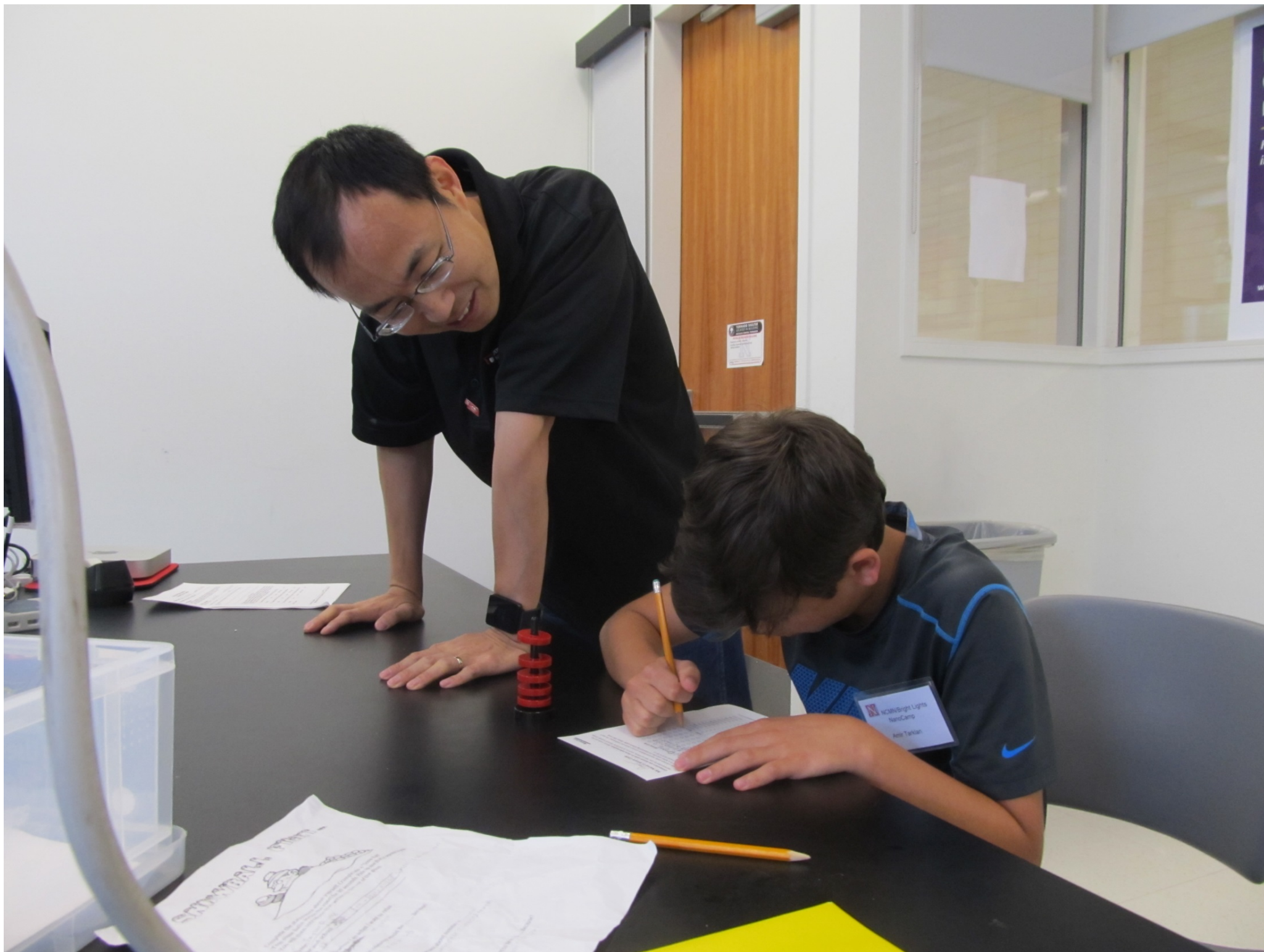


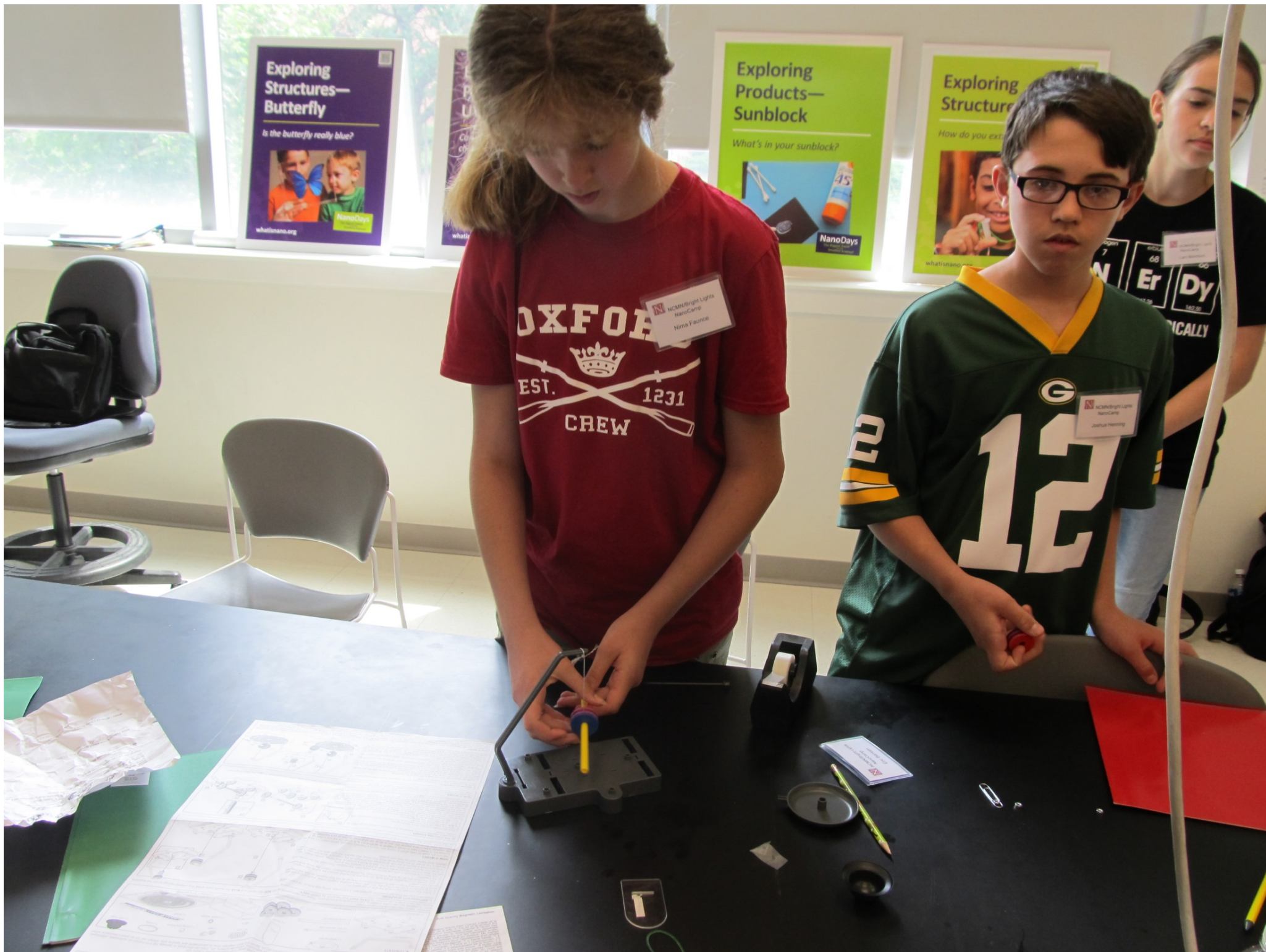




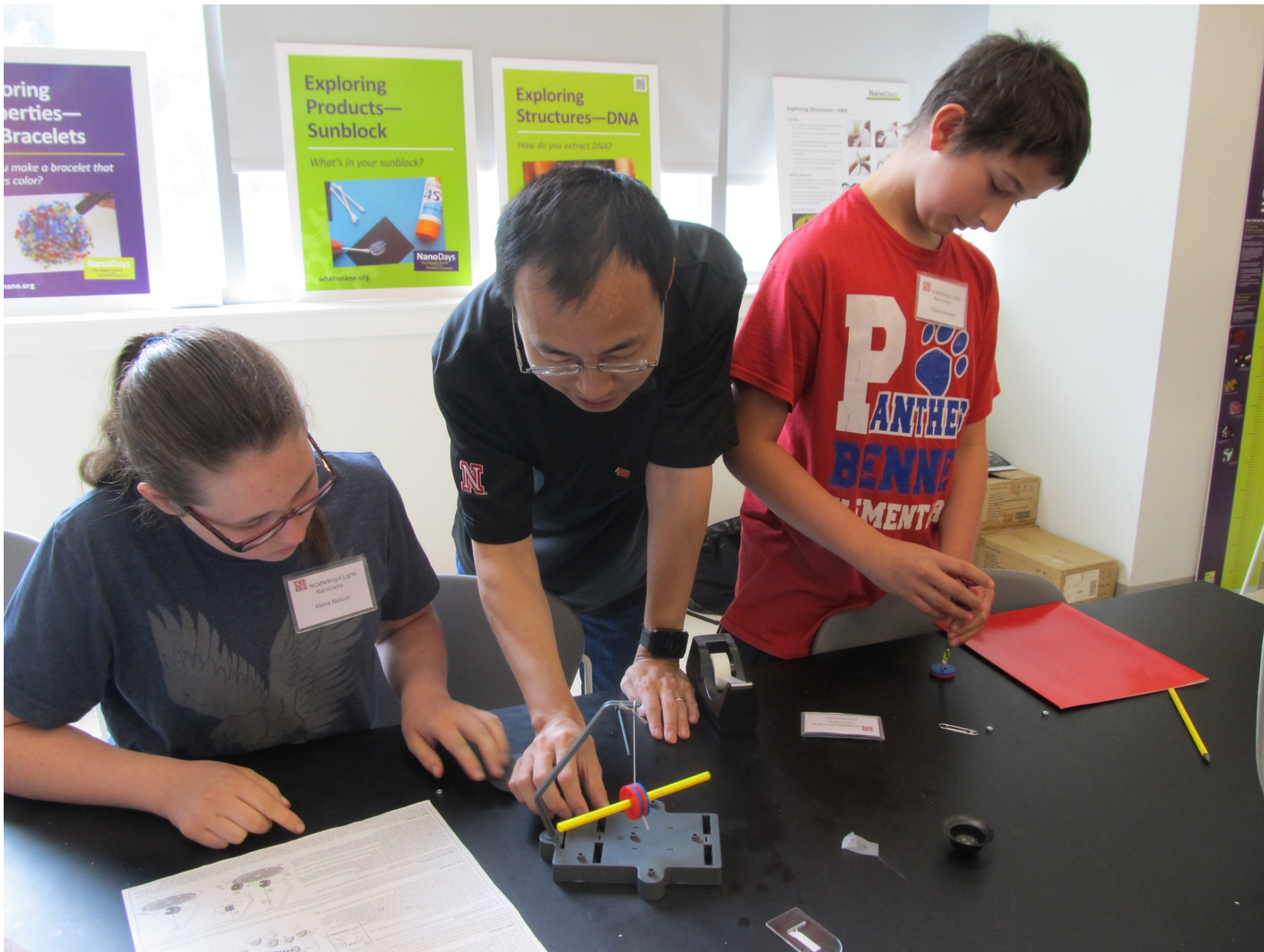












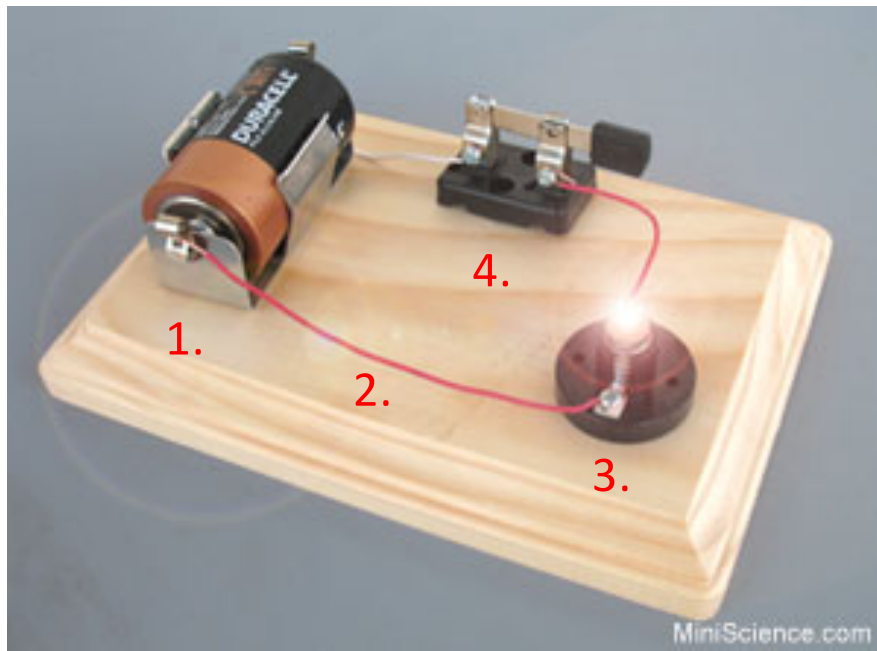


Tuesday

- **Electronic Circuits**
Squishy Circuits
Lemon Batteries

Basic Circuits

- What do you have to have for an Electrical Circuit?



1. Energy Source
2. Conducting path
3. Load (Resistance)
4. Switch (not needed, but usually present)

Let's make circuits

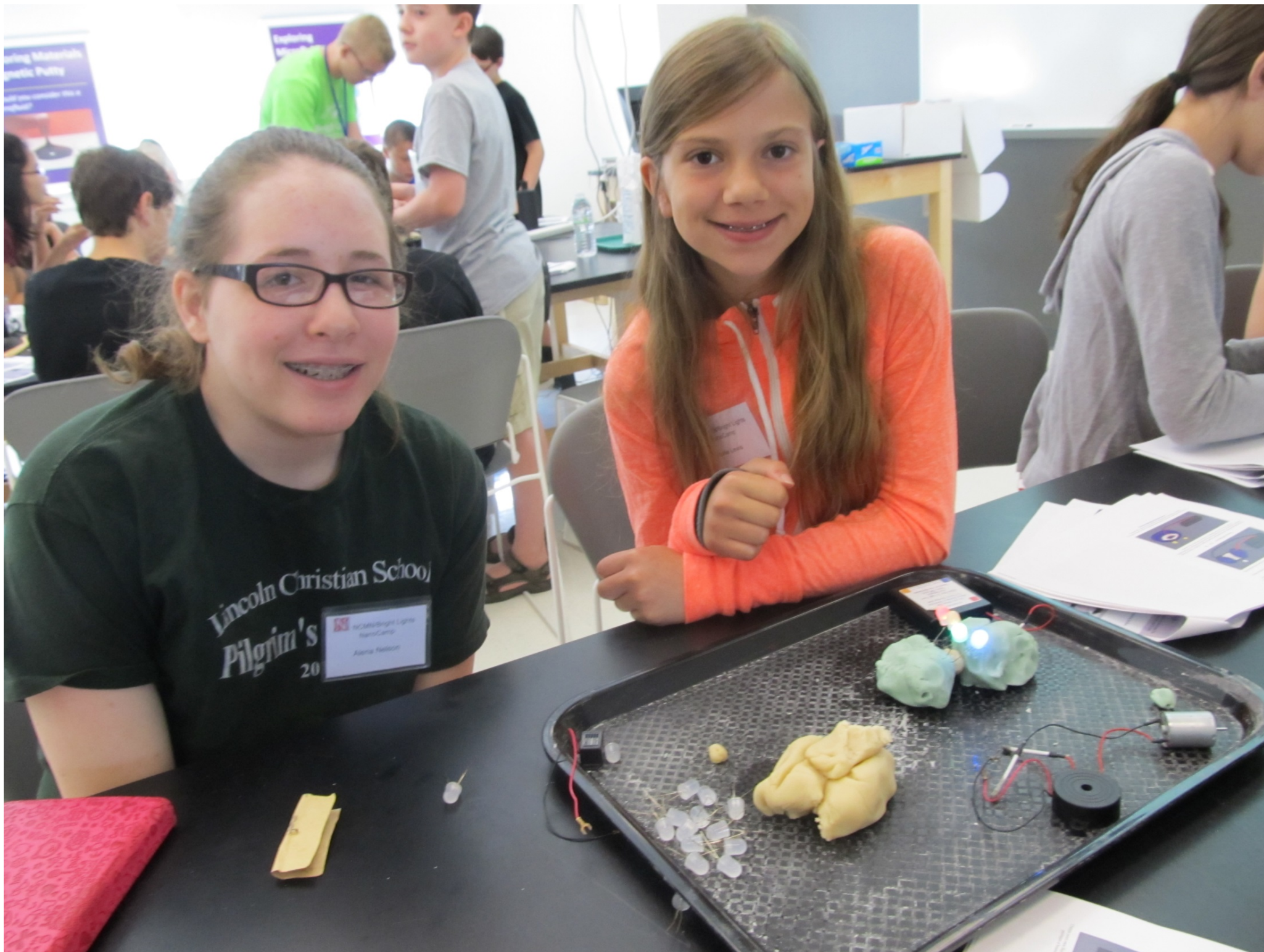


LEDs

















Wednesday

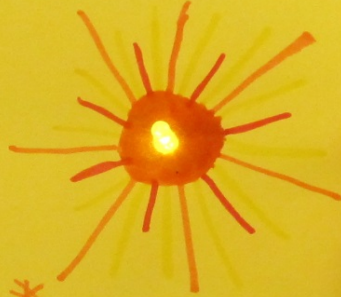
- **Tour of Nanoscience Center**
- **DNA and Genes**
- **Graphene**
- **Nano and Nature**



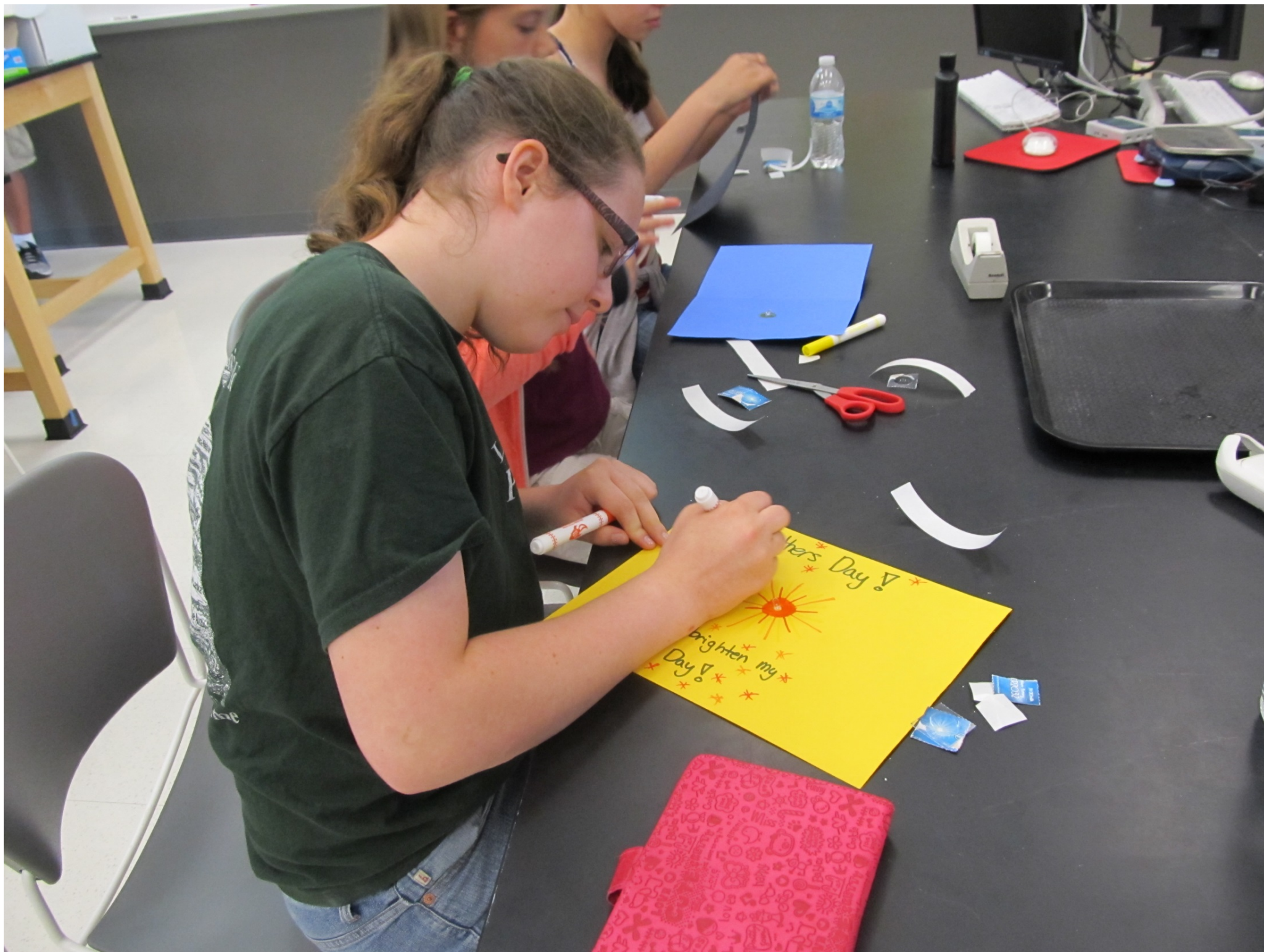


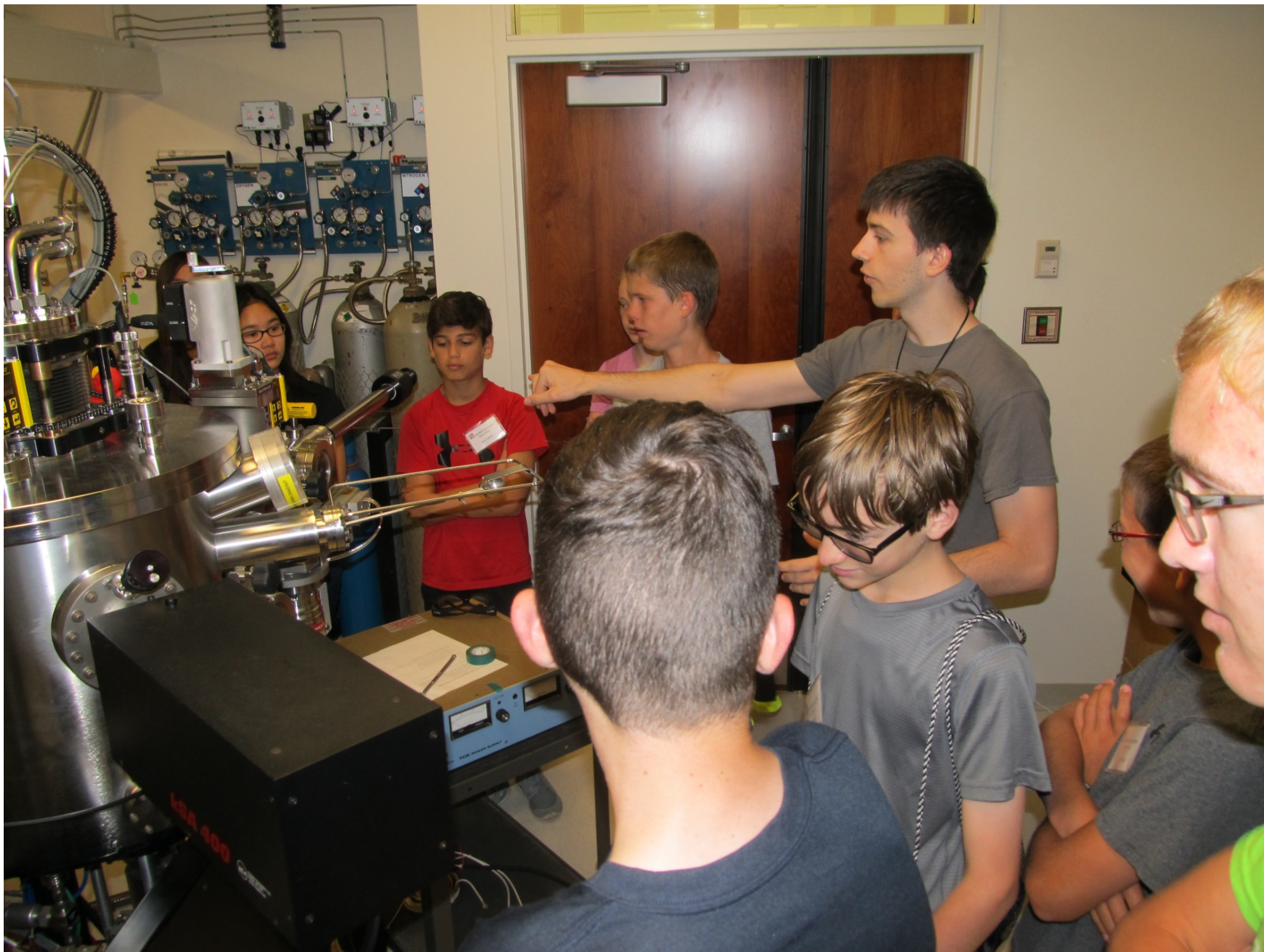


Happy Fathers Day!



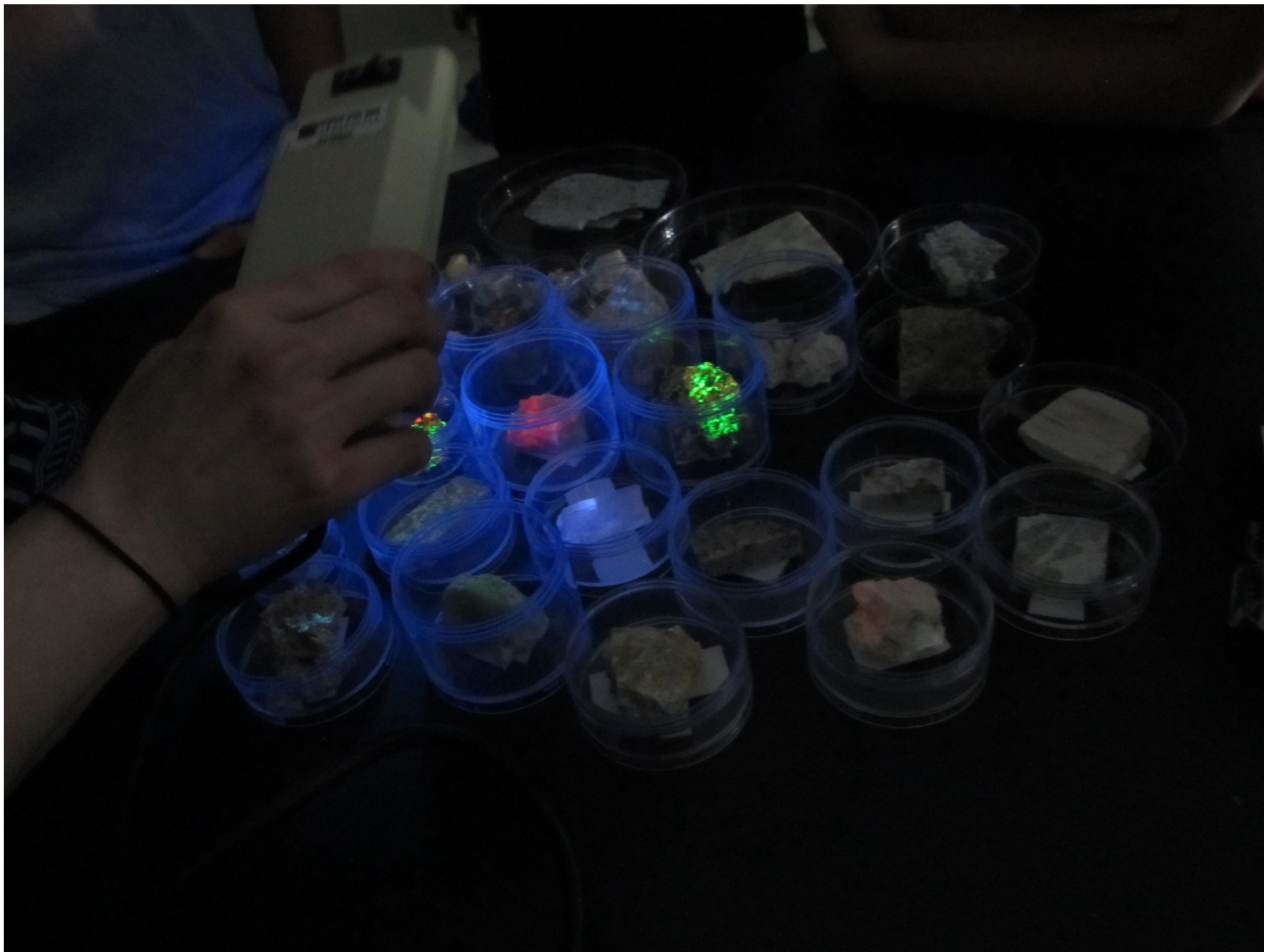
You brighten my
Day!













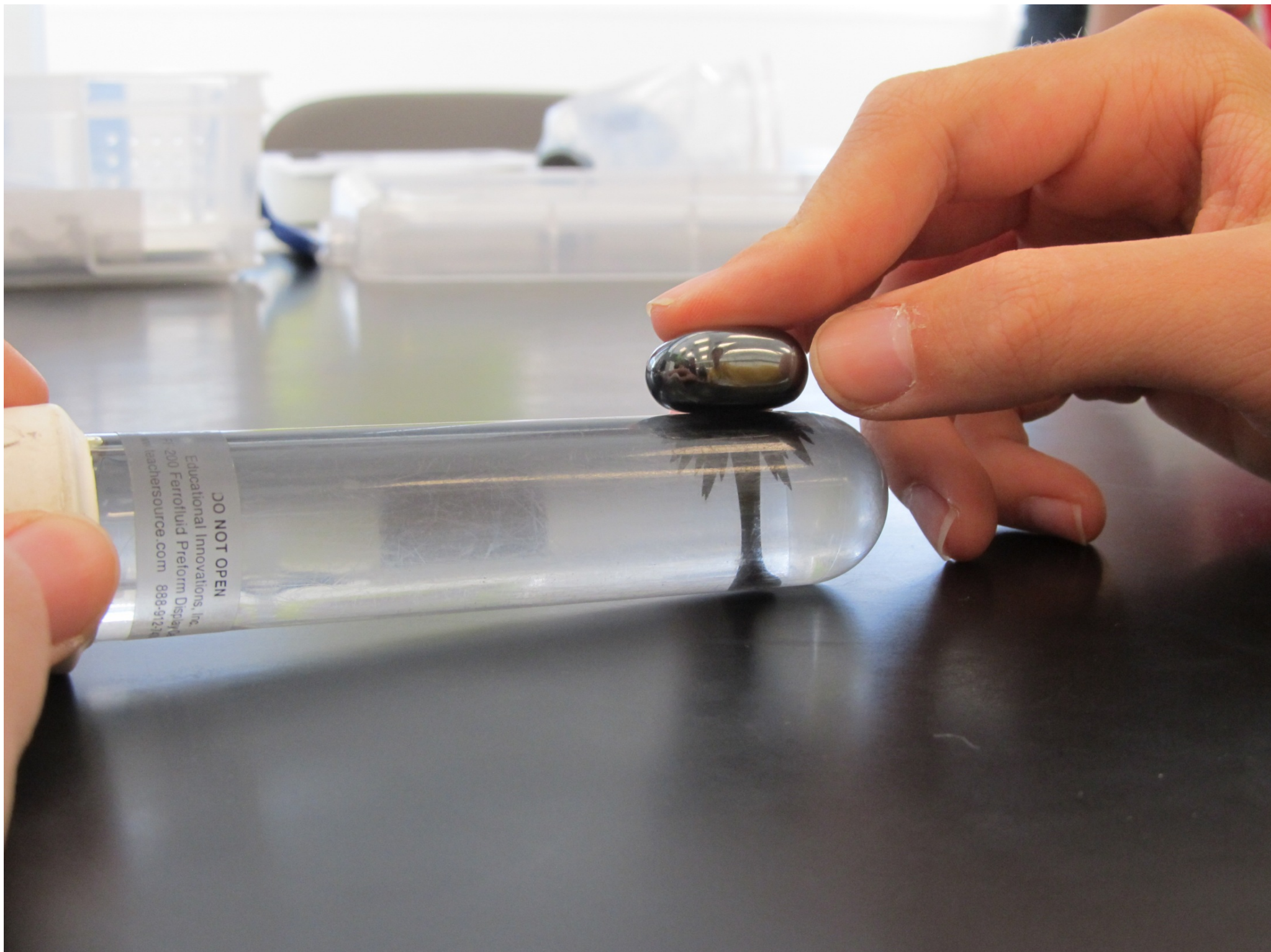






Thursday

- **Nanocomposite Materials**
- **Alloys**
- **Carbon Nanotubes**
- **Nanotechnology & the Body**











Exploring Products— Computer Hard Drives

How do hard drives store
information?



NanoDays

whatisnano.org

Exploring Properties— Invisibility

... scientists make things



NanoDays

NEBRASKA
FOOTBALL 2012

University of Nebraska
Lincoln
Jackson Hall

N

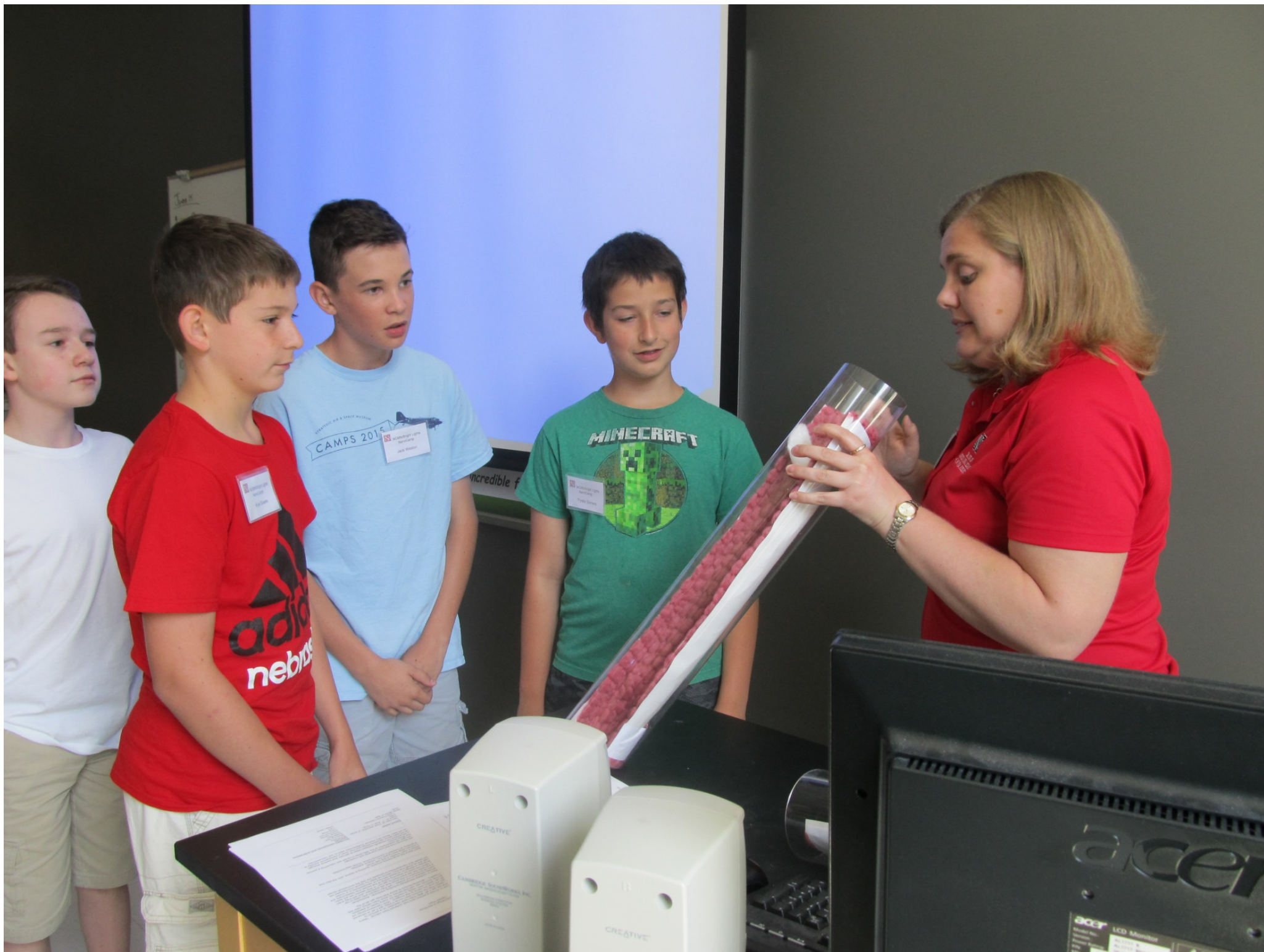










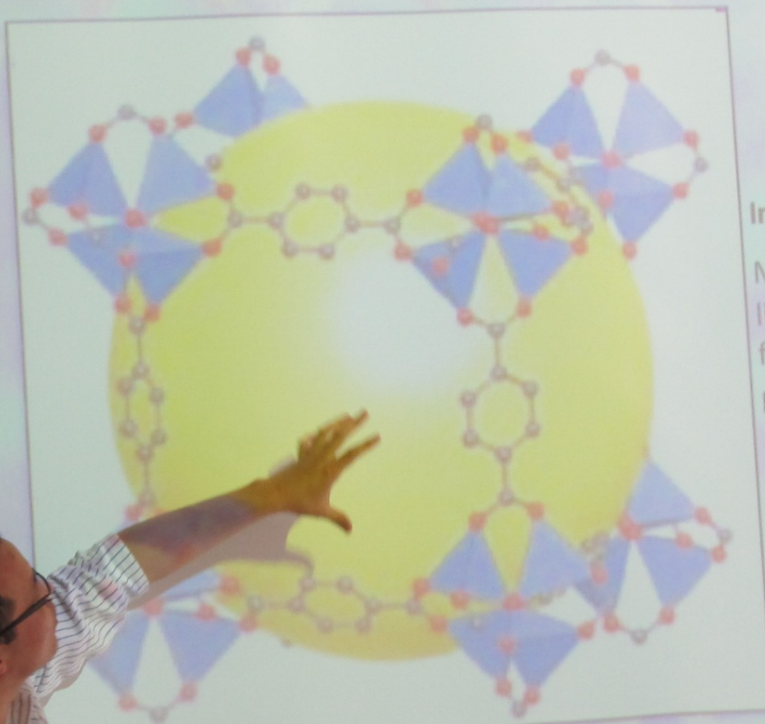




Friday

- **Metal Organic Frameworks**
- **Nano Ice Cream**
- **Open House**

Metal Organic Frameworks: MOFs



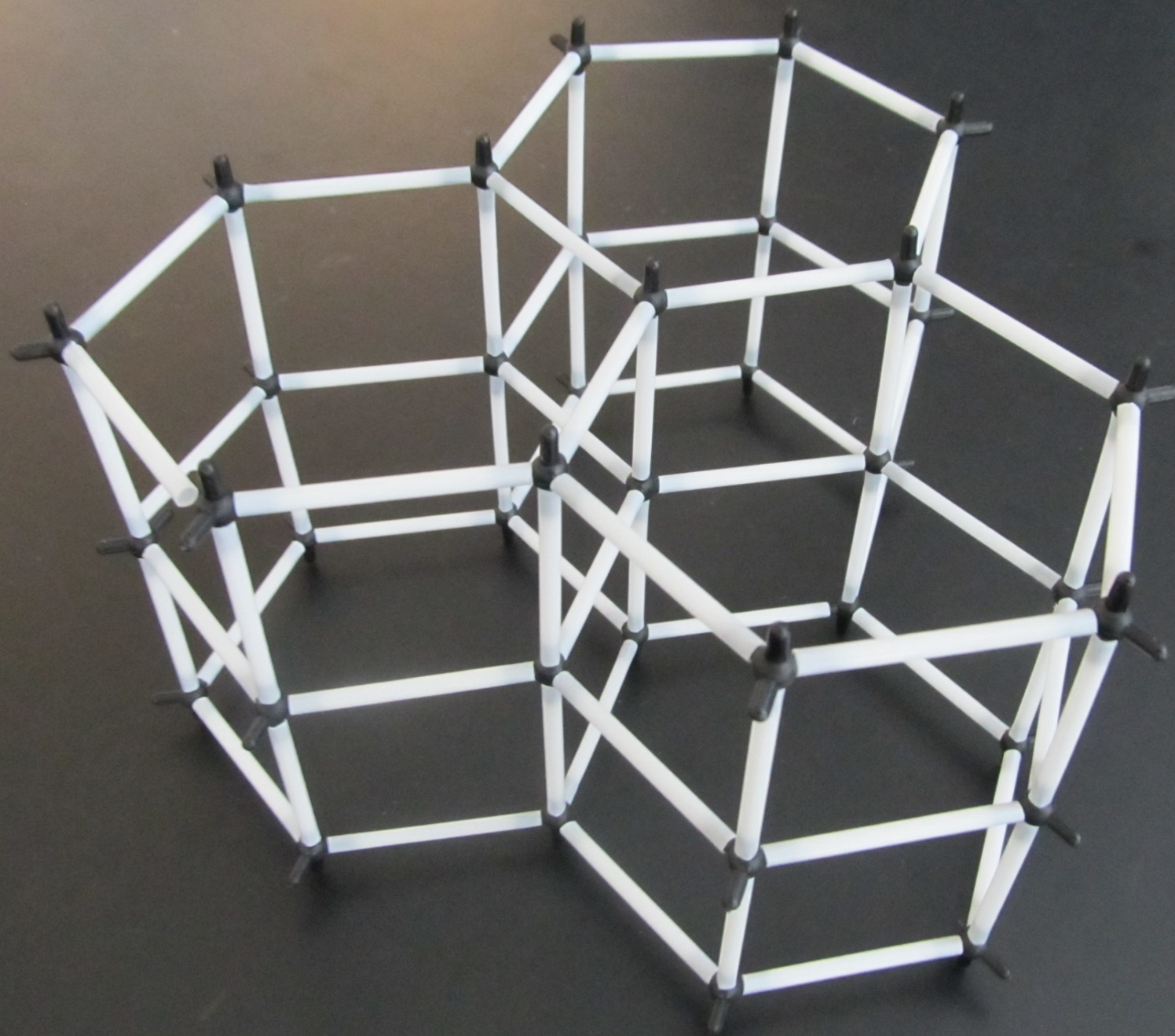
Inorganic-Organic hybrid materials

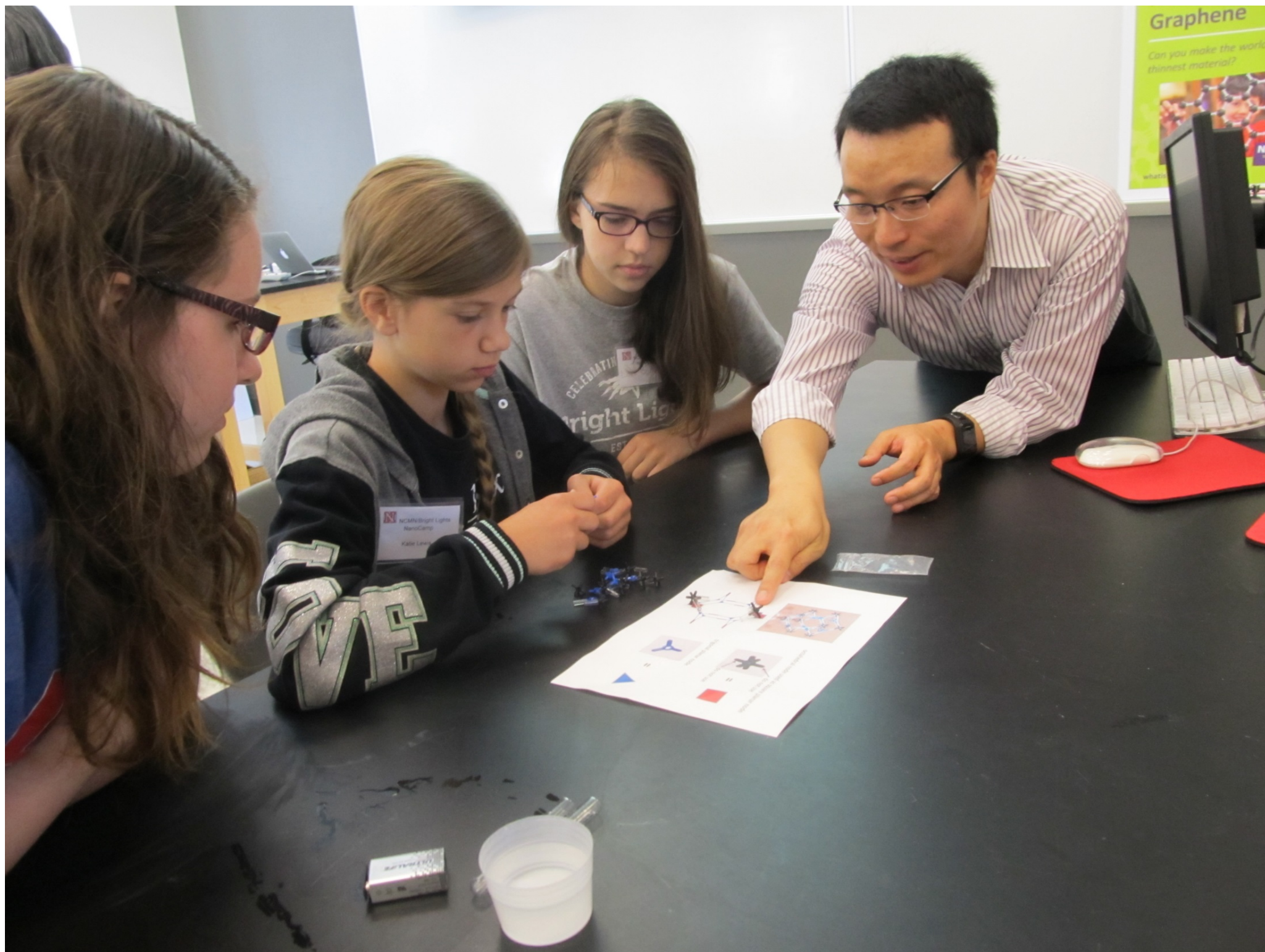
Metal nodes are joined by organic linkers, giving an extended 3D cubic framework with inter-connected pores of 11.2 Å aperture width and 18.5 Å pore (yellow sphere) diameter

network
p

phene Rm 141

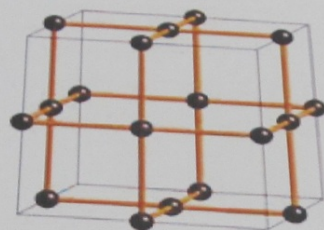
ymers 137







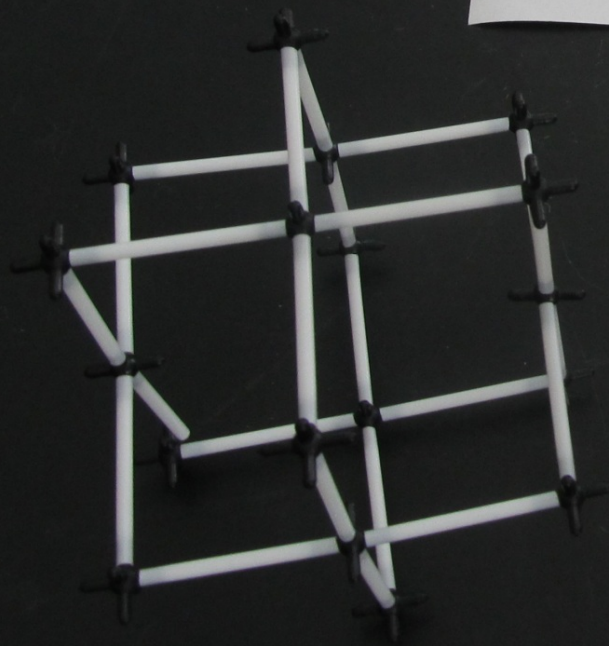
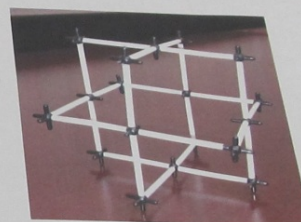




octahedral nodes used as square planar nodes
do not use



do not use



nano

Ice Cream



Nanocamp

June 20, 2013

Zane Gernhart









What is ice cream??

- It has ice in the name, is it a solid?
 - Not quite! See how it took the shape of
- Is it a liquid?
 - Not unless you wait too long
- **It's both!**



Colloids

- A colloid is one phase mixed into another.

COLLOID SYSTEMS		Continuous Phase		
		Solid	Liquid	Gas
Dispersed Phase	Solid	Solid 	Sol 	Smoke 
	Liquid	Gel 	Emulsion 	Fog 
	Gas	Solid foam 	Liquid foam 	(none)

- Ice cream is both a foam, emulsion, and sol!









